

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

INTERMOUNTAIN FOREST AND RANGE EXPERIMENT STATION

Reed W. Bailey, Director

U. S. Department of Agriculture

Forest Service

MEALYBUG INFESTATION  
HAZARD LAKE AREA  
PAYETTE NATIONAL FOREST

APPRAISAL SURVEY  
August 1958



By

R. I. Washburn and W. E. Cole  
Entomologists

Division of Forest Insect Research  
Ogden, Utah

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INTRODUCTION

On July 30, 1958, the Division of Forest Insect Research received a detection report from the Payette National Forest of an infestation of a soft-bodied insect in alpine fir. From the sample of infested material sent along with the report, it was possible to determine that a mealybug was responsible for the damage. The infestation was reported to be located due north of Hazard Lake along Lava Ridge and in the upper Hazard Creek drainage. Hazard Lake is approximately 22 miles north of McCall, Idaho.

On August 7, 1958, this infestation was appraised by entomologists W. E. Cole and R. I. Washburn in the company of Forest Ranger Bill Parks.

RESULTS

The results of this appraisal disclosed that the mealybugs were feeding primarily on the true firs. However, some lodgepole pine, white bark pine and Engelmann spruce were also affected. The evidence indicated a very heavy population of mealybugs had been actively feeding throughout the growing season of 1958. In most cases the foliage and twigs of the affected trees were almost completely covered with a heavy deposit of a black sooty mold brought about by the liquid sugary discharge of the mealybugs. The presence of the heavy deposit of sooty mold made the trees appear dead or dying. Upon removal of the sooty mold it was disclosed that the majority of the needles were alive and green, but did contain scattered feeding scars. Occasional twig killing was noted but the damage was assessed to be light. No mealybugs were found on the bole of the infested trees. At the time of the observations mealybug population consisted of mature female adults and eggs. Eggs had been deposited in small circular cottony masses and were generally attached at the junction of twigs. It was surmised that the mealybug would overwinter in the egg stage and in all probability several generations occurred during the summer months. Samples taken of the egg population showed an average of 17.5 egg masses per two-inch twig on fir, and 15.6 on spruce, with an average of 26.5 eggs per mass on fir and 32.0 on spruce.

At the time of examination the infestation was known to cover slightly over 3,000 acres. The extent of the infestation will be determined at a later date by aerial observation.

#### DISCUSSION AND RECOMMENDATIONS

In all probability, the mealybug infesting fir stands in the vicinity of upper Hazard Creek is a native pest. No evidence of severe past damage was noted, but undoubtedly the pest has built up and died down in the past. The relatively mild winter of 1957-1958 in this area may be partly responsible for the present outbreak.

Heavy deposits of black sooty mold may prove to be a detrimental influence since the mold can clog the stomata and act as a shading factor that could tend to slow the transpiration of the affected trees. By simulating rain in the laboratory it was possible to wash off a considerable amount of the mold from branch samples. Therefore, it is concluded that fall rains and winter snows will probably wash off sufficient amounts of sooty mold to prevent serious damage to the trees.

Experience has shown that in general mealybugs infesting coniferous trees take several years (5 or more) for epidemic populations to cause tree mortality. If the epidemic dies out in a year or two, as we feel it will, no serious loss should occur. However, since it is usually difficult to predict the outcome of an insect outbreak, particularly one of a little known insect, this infestation will be watched closely by Station entomologists and any change in its status reported to the forest.

No practical control measures are known to combat this pest under forest conditions. In any case, we do not feel that any control action would be warranted at this time.

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# PAYETTE NATIONAL FOREST

**MEALY BUG  
INFESTATION**

**IDAHO**

**BOISE MERIDIAN**

**1956\***

KEY MAP

MOSCOW

MCCALL

BOISE

IDAHO FALLS

IDAHO

